DATE: November 5, 1992

TIME: 11:10 AM

PHOTOGRAPH TAKEN BY:
Mark Weber

PHOTO NUMBER: 17

LOCATION: IL0316610037
Cook County
Standard Scrap Metal
ILD 045698263

PHOTO TAKEN TOWARD:
East

Close up of sample X110 which was taken from the waste pile located in Standard's east lot.

DATE: November 5, 1992

TIME: 11:10 AM

PHOTOGRAPH TAKEN BY:
Mark Weber

PHOTO NUMBER: 18

LOCATION: IL0316610037
Cook County
Standard Scrap Metal
ILD 045698263

PHOTO TAKEN TOWARD:
South

Photo of waste pile with rail overpass in the background.

DATE: November 5, 1992

TIME: 11:20

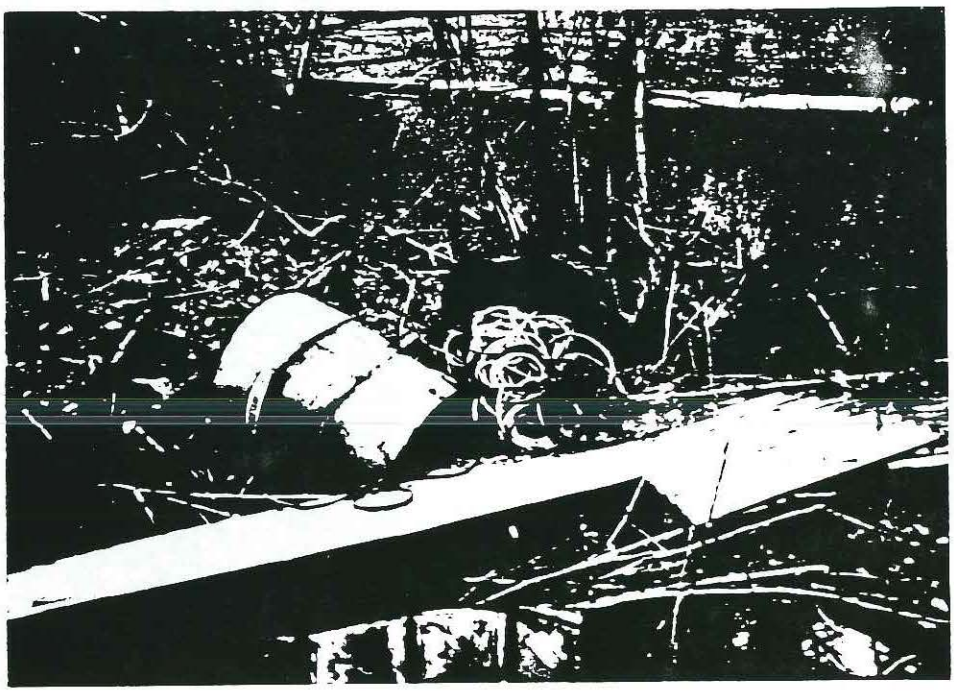
PHOTOGRAPH TAKEN BY:
Mark Weber

PHOTO NUMBER: 19

LOCATION: L0316610037
Cook County
Standard Scrap Metal
ILD 045698263

PHOTO TAKEN TOWARD:
North

Photo of scrap wire that may have been burned by an incinerator operated at Standard Scrap.



DATE: November 5, 1992

TIME: 11:20 AM

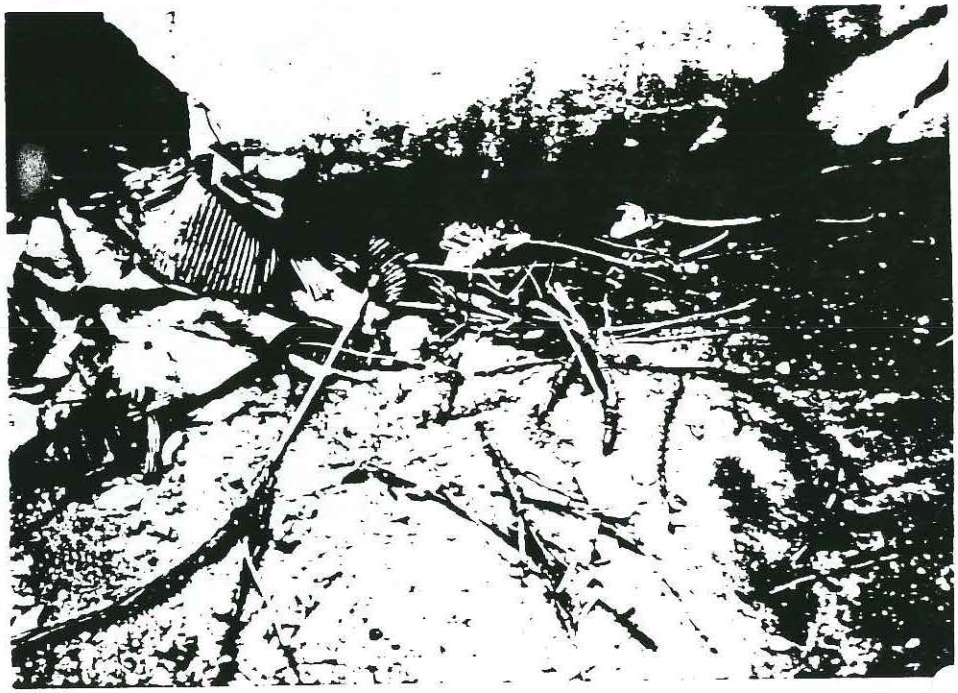
PHOTOGRAPH TAKEN BY:
Mark Weber

PHOTO NUMBER: 20

LOCATION: L0316610037
Cook County
Standard Scrap Metal
ILD 045698263

PHOTO TAKEN TOWARD:
North

Photo of scrap wire that may have been burned by an incinerator operated at Standard Scrap.



DATE: November 5, 1992

TIME: 12:00 AM

PHOTOGRAPH TAKEN BY:
Mark Weber

PHOTO NUMBER: 21

LOCATION: L0316610037
Cook County
Standard Scrap Metal
ILD 045698263

PHOTO TAKEN TOWARD:

Photo was lost.

DATE: November 5, 1992

TIME: 12:00 AM

PHOTOGRAPH TAKEN BY:
Mark Weber

PHOTO NUMBER: 22

LOCATION: L0316610037
Cook County
Standard Scrap Metal
ILD 045698263

PHOTO TAKEN TOWARD:
Ground

Encountered phosphorous type substance at this point during the soil sampling.

DATE: November 5, 1992

TIME: 12:10 AM

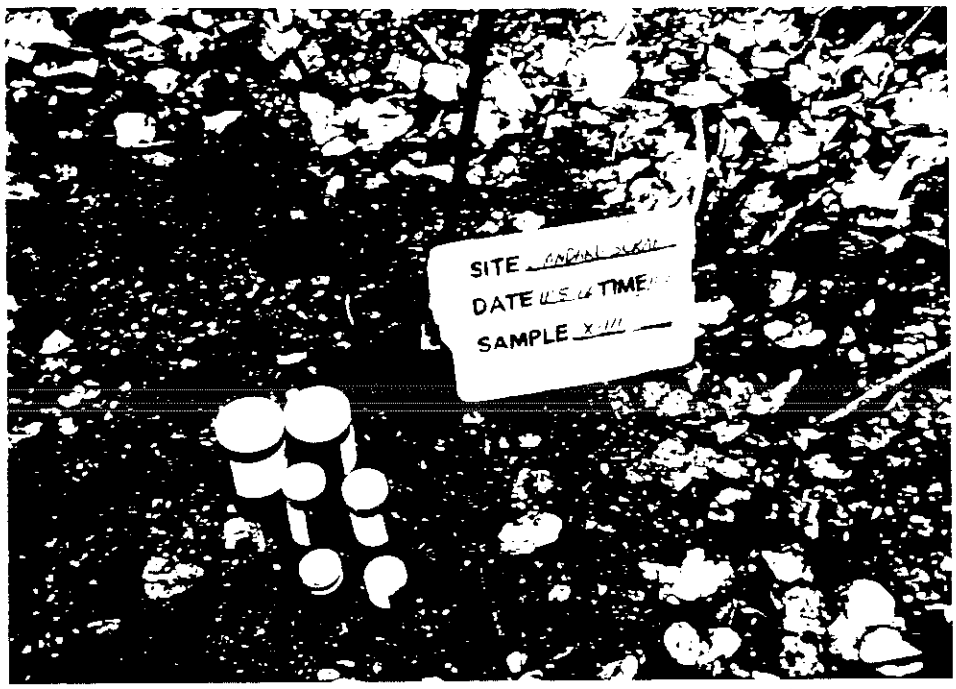
PHOTOGRAPH TAKEN BY:
Mark Weber

PHOTO NUMBER: 23

LOCATION: L0316610037
Cook County
Standard Scrap Metal
ILD 045698263

PHOTO TAKEN TOWARD:
West

Close up of sample X111 where phosphorous type substance was encountered.



DATE: November 5, 1992

TIME: 12:12 AM

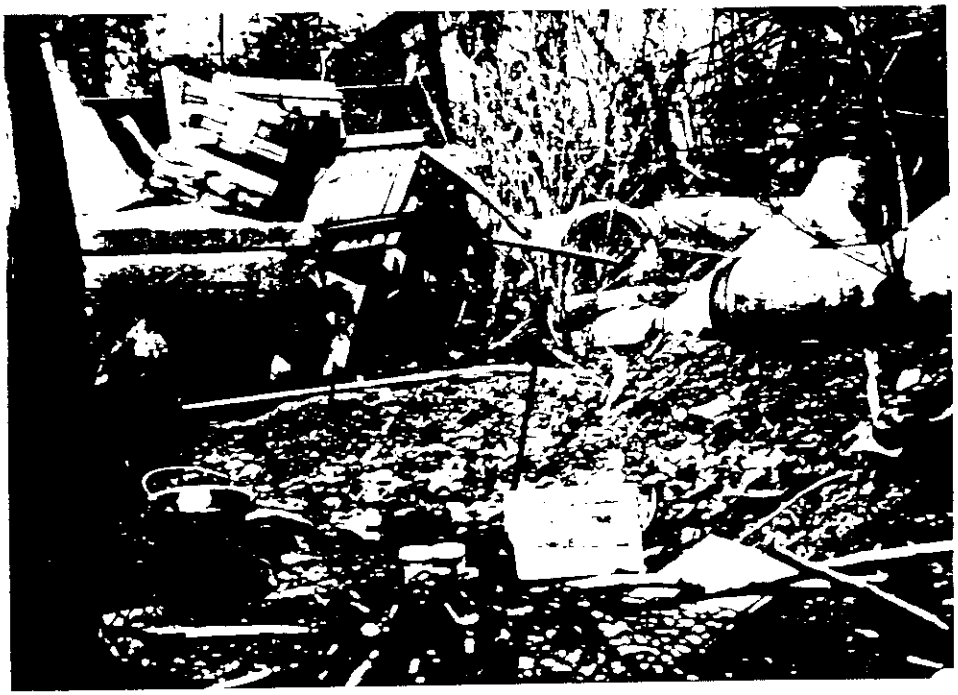
PHOTOGRAPH TAKEN BY:
Mark Weber

PHOTO NUMBER: 24

LOCATION: L0316610037
Cook County
Standard Scrap Metal
ILD 045698263

PHOTO TAKEN TOWARD:
West

Photo of sample X111 taken towards northwest corner of Standard's east lot.



DATE: November 5, 1992

TIME: 12:50 AM

PHOTOGRAPH TAKEN BY:
Mark Weber

PHOTO NUMBER: 25

LOCATION: L0316610037
Cook County
Standard Scrap Metal
ILD 045698263

PHOTO TAKEN TOWARD:
North

Close up of sample X112 taken in side yard of [redacted] S. Wells residence.

DATE: November 5, 1992

TIME: 12:52 AM

PHOTOGRAPH TAKEN BY:
Mark Weber

PHOTO NUMBER: 26

LOCATION: L0316610037
Cook County
Standard Scrap Metal
ILD 045698263

PHOTO TAKEN TOWARD:
East

Northeast corner of front of residence at [redacted] South Wells Avenue.

DATE: November 5, 1992

TIME: 1:05 PM

PHOTOGRAPH TAKEN BY:
Mark Weber

PHOTO NUMBER: 27

LOCATION: L0316610037
Cook County
Standard Scrap Metal
ILD 045698263

PHOTO TAKEN TOWARD:
North

Close up of sample X113 taken from vacant lot north of the [redacted] S. Wells residence.

DATE: November 5, 1992

TIME: 1:05 PM

PHOTOGRAPH TAKEN BY:
Mark Weber

PHOTO NUMBER: 28

LOCATION: L0316610037
Cook County
Standard Scrap Metal
ILD 045698263

PHOTO TAKEN TOWARD:
South

Residence at [redacted] South Wells Avenue in the background.

From: PEGGY DONNELLY
To: R5WST.R5RCRA.CAMPBELL-DUNCAN
Date: Wednesday, February 7, 1996 3:29 pm
Subject: RCRA Sampling/analysis questions

Duncan,

Sorry I have not replied to your questions about sampling and analysis from the PCB contaminated waste stream. This is definately something we can and will do. I checked with my boss (Lab Director, Chuck Elly) on the issue, and he said the following...

>>> CHARLES T. ELLY 02/07/96 02:04pm >>>
Duncan should have his RCRA Enforcement Chief identify the sampling entity. He should send a request to me care of Chi Tang(RSCC) or come to the next RSCC meeting to request it. Better yet, have him contact Chi. We can do the analyses.4
>>>>>>>>>>>>>>>>>>>>>>>>>>>>.....

...Basically, this means we need to know the name of the facility, locations and numbers of samples (at least an estimate) to be collected, and sample type (water, sludge, soil, air, etc.). Do you have a layout of the facility? --then we can figure out where we want to sample before we get there. Once you (or we) have decided on the number of samples, type, and what analytes to test for, we'll be all set to go. Chi Tang (my former Section Chief) is in charge of scheduling when samples can come into the lab. Depending on holding times for different testing parameters, that will determine when we can go out and collect. Chuck Elly suggests that we have an old CDO inspector (maybe Keith Lesniak, now in SF) come with us. I can talk to Keith, if you'd like -- we're buddies.

This sounds somewhat confusing, I'm sure. But, really, it is not! I'll try and call you to explain. We'll bust these guys if they are trying to play with the law!!

From: PEGGY DONNELLY
To: R5WST.R5RCRA.CAMPBELL-DUNCAN, R5ESD.ZOLNIERCZYK-KE...
Date: Thursday, February 8, 1996 4:21 pm
Subject: CIE Sampling (PCB and Metals via TCLP)

Ken and Duncan,

Could each of you please send a WPO message to Chi Tang, the CRL sample coordinator, regarding the samples that will be brought into the lab tomorrow. Include when and where they will be collected, which analytes you want tested for, aproximate number of samples, when results are needed, etc. Be sure to mention that the TCLP metals scan is for RCRA enforcement, and the PCBs are for the Toxics program. This will help expedite the analyses and be sure they are put onto the chemists' schedule. Also, let Chi know to whom the results should be sent. I have verbally told him of all that is happening tomorrow, and everything is set, but it is good to let him see the request in case of questions.

Call me in the lab if there are any questions, need tags, bottles, etc.
Peggy 3-9467

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

October 25, 1995

REPLY TO THE ATTENTION OF:

VIA FAX
THEN U.S. MAIL

Chicago International Exporting
Chicago International Chicago, Inc.
Attn: Mr. Steven Cohen and Mr. Lawrence Cohen
4020 S. Wentworth Ave.
Chicago, Illinois 60609
FAX (312) 924-4020

Re: Completion of Work under Order No. V-W-95-C-283 for the Standard Scrap/Chicago International Exporting Site, Chicago, Illinois, Cook County

Dear Sirs:

The United States Environmental Protection Agency (U.S. EPA) issued Unilateral Administrative Order No. V-W-95-C-283 on February 6, 1995 ("Order") to Chicago International Exporting, Chicago International Chicago, Inc. and Mr. Steven Cohen, and Lawrence Cohen ("Respondents"), requiring that those parties perform specified response actions at the Chicago International Exporting Site located at 4000-4020 South Wentworth, and 4004-4027 South Wells Streets, Chicago, Illinois ("Site"). The Order was issued to cease the on-going releases of hazardous substances and hazardous wastes from the Respondents' operations related to electric motors, scrap, scrap steel, shredder pickings, transformers, and other materials until appropriate pollution control equipment was installed. Pursuant to activities begun by Respondents, a sampling plan was submitted to U.S. EPA describing the sampling to be performed, and an Operational Contingency Plan was submitted which describes actions designed to control on-going and future releases at the facility from the shredding and separation processes, and the "motors-in-motors-out" operation at the Site.

On October 3, 1995, Respondents submitted a final report detailing the Results of the Air and Process Stream Sampling, and concurrently submitted an Operating and Contingency Plan. Based on my oversight of the Respondents' activities at the Site, my review of the final report, and a final inspection of the Site performed on October 12, 1995, I conclude that Respondents have completed the following work required by the Order:

1. Submission of an Air and Process Sampling Plan in May of 1995.

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2. Completion of three rounds of sampling the shredder process waste streams and copper separator waste streams. Completion of three rounds of ambient air monitoring.

3. Submission of an Operating and Contingency Plan on October 3, 1995 which identifies actions that, if taken as set forth in the Operation Plan, will mitigate releases of hazardous substances from the shredding and copper separation operations, and the "motors-in-motors-out" operation. The Operation Plan covers material handling procedures, maintenance procedures, spill and baghouse failure contingency, reporting releases and training of current and new employees, and disposal of generated wastes.

4. Submission of Respondents' Results of Air and Process Stream Sampling Report in October of 1995 ("Sampling Results").

U.S. EPA has reviewed the final submission by Respondents and their Sampling Results and approves the report with the following modifications:

1. Page 9, Sampling Results suggests that the shredder pickings contain a total of 6.4 ppm of PCBs. The method used to calculate this number is not in the Federal, State or Local regulations, nor is it in any U.S. EPA Guidance documents. U.S. EPA does not agree with the method used to calculate this number and considers the shredder pickings to be a potential TSCA regulated waste as per the sampling conducted by the On-Scene Coordinator and as per sampling results submitted by Respondents. Delete last para. on p. 6 and figure 2 on p. 9.

2. Future sampling of the copper fines and pavement sweepings shall not incorporate compositing of the sampling as was done in prior sampling events. Each box of copper fines and pavement sweepings shall be sampled separately and are not to be composited. Prior to the Quarterly sampling of process waste streams, U.S. EPA TSCA Coordinator, Mr. Ken Zolnierczyk, shall be contacted at 312-353-9687, to oversee sample collection.

3. Operational and Contingency Plan- page 11- Baghouse Maintenance and Inspection. Insert the following:

a) On a daily basis check and record the baghouse pressure drop,

b) On a daily basis check to ensure that dust is being removed from the system,

c) On a weekly basis inspect all filter bags for tears, holes, abrasion, proper fastening, bag tension, and dust accumulation on the surface or in creases and folds. Maintain an adequate supply of spare filter bags to ensure that worn bags are replaced immediately,

d) On a weekly basis check cleaning sequence and cycle times for proper valve and timer operation. Check compressed air lines including oilers and filters. Inspect shaker mechanisms for proper operation.

Insert: any fire or smoke observed in the shredder or bag house will result in immediate shut down and emergency procedures to contain the fire or smoke. Bags must be inspected and replaced after the emergency and prior to start up of the shredder.

4. Table 4 of the Sampling Results indicates a hypothesis testing for Monitoring Programs. The Guidance used to calculate these cut-off values is not consistent with the TSCA regulations regarding dilution of the waste stream. Further sampling events will decrease the cut off values so they must be calculated again after the quarterly sampling.

5. Section 2.0 Sample Results, p.2, Para. 5 The use of total lead analysis as a "TCLP-equivalent" is unacceptable for future sampling. The Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901-6991i requires that for purposes of disposal, actual TCLP analysis must be performed, not total analysis. Since the receiving disposal facility is required to treat the waste prior to disposal, the record must show actual TCLP concentrations. Modify this section accordingly for future sampling.

6. Page 21 of the Operating and Contingency Plan, on Storage and Disposal of Waste. Indicate that Respondents have applied for a generator identification number from U.S. EPA. Respondents must also file a notification of hazardous waste activity pursuant to section 3010 of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6930. Respondents must also file EPA Form 7710-53 notifying U.S. EPA of its PCB waste activities pursuant to 40 C.F.R. § 761.205(c)(2).

7. P.29, 3rd para. of Operating and Contingency Plan - Add the following sentences: To ensure samples of copper fines collected by Respondents are representative of the normal output of the shredder, the composite sample of copper fines to be collected by Respondents on a quarterly basis may be collected during an unannounced visit of a U.S. EPA inspector or representative of U.S. EPA, as U.S. EPA determines is necessary. Respondents may either collect its

own samples at such time or the U.S. EPA inspector or representative of U.S. EPA will collect the samples and provide Respondents with split samples.

8. Operating and Contingency Plan, P. 18: Delete references to 1 hour and 4 hours. Insert "immediately" as the time frame within which a spill must be reported. Also, identify the Local and State Emergency Response Commission to be notified as required under Emergency Planning and Community Right-To-Know Act (EPCRA), 42 U.S.C. §§ 11001-11050.

This letter merely reflects the U.S. EPA's determination that the work required by the Order was completed and that a final report has been submitted and approved, subject to the modifications stated above. This notice of completion in no way releases Respondents from any potential future obligations to perform additional work to address the same, or other, conditions at the site. This letter is not, and shall not be construed to be, a permit issued pursuant to any federal or state statue or regulation. Similarly, this notice of completion does not release Respondents from any record keeping, payment, or other obligations under the Order that extend beyond the date of this notice. This notice of completion does not in any way certify compliance of the Respondents' facility with the Federal and State Laws which regulate the generation, storage and disposal of the waste streams resultant from the shredding and separation systems, and "motors-in-motors-out" operation.

Further, nothing herein shall limit the power and authority of U.S. EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent U.S. EPA from seeking legal or equitable relief to enforce the terms of the Order. U.S. EPA also reserves the right to take any other legal or equitable action as it deems appropriate and necessary, or to require the Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law.

Nothing in this letter constitutes a satisfaction of or release from any claim or cause of action against the Respondents or any person not a party to the Order, for any liability such person may have under CERCLA, other statutes, or the common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106(a) or 107(a) of CERCLA, 42 U.S.C. §§ 9606(a), 9607(a).

Please submit the revisions outlined above in the final reports and re-submit to the U.S. EPA. Please contact me at 312-353-9351, or Kurt Lindland, Assistant Regional Counsel at 312-886-6831 if you have any questions concerning this letter.

Sincerely,

Steven J. Faryan
U.S EPA Region V
On-Scene Coordinator

cc: Joseph G. Nassif (By FAX)
Coburn & Croft
Suite 2900
One Mercantile Center
Saint Louis, Missouri 63101
FAX (314) 621-2989

Samuel D. Brooks (By FAX)
U.S. Attorneys Office
Northern District of Illinois
219 S. Dearborn St.
Chicago, Illinois 60404
FAX (312) 886-0657

bcc: Kurt Lindland, ORC
Chris Liiszewski, ORC
Debbie Regal, WMD
Jonathon Adenuga, HRE-HJ
Ken Zolnierczyk, SPB-14J
Brent Marable, AR-18J
Site File

Prepared For:

CHICAGO INTERNATIONAL EXPORTING
4020 Wentworth Avenue
Chicago, Illinois

DRAFT

Results of Air & Process Stream Sampling Pursuant to USEPA Administrative Order (dated February 6, 1995)

CWE Job No. C075-083

Prepared By:

Clean World Engineering, Ltd.
1776B S. Naperville Road, Suite 102
Wheaton, IL 60187-8100
(708) 260-0200
(708) 260-0797 (Fax)

Date: October 1995

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2.0 SAMPLING AND ANALYTICAL METHODOLOGY ..... PAGE 2
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TABLE 3 Air Monitoring Results ..... Page 8
FIGURE 2 Distribution Of P C Bs In Shredder Pickings ..... Page 9
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5.0 CONCLUSIONS .....PAGE 12

1.0 INTRODUCTION

This report documents the results of the sampling and analysis conducted pursuant to USEPA's Unilateral Administrative Order for Chicago International Exporting, dated February 6, 1995.

2.0 SAMPLING AND ANALYTICAL METHODOLOGY

Most details of the sampling protocol are provided in the sampling plan. The following discussion provides an overview of the sampling program.

The baghouse dust was sampled by hand augering down the center of each Gaylord box and collecting a subsample from the top, middle and bottom levels. The top, middle and bottom subsamples from each box sampled were then combined in a stainless steel bowl and manually mixed to form a homogeneous composite of all subsamples. The same procedure was also followed for the seperator table fluff. The number of boxes representing each composite sample are shown in Table 1.

The copper fines were sampled in a similar manner as the baghouse dust and seperator table fluff except that a small shovel was used to dig through the middle of each container. The number of containers sampled during each round of sampling is also shown in Table 1.

The scrap steel and scrap copper was sampled by simply grabbing 10 subsamples from whatever stockpiles were present on the day of sampling. The 10 subsamples were evenly distributed over the surface of the scrap steel stockpiles and over the surface and interior portions of the scrap copper stockpiles. The interior portions of the scrap copper stockpiles were accessed by cutting halfway into the pile using a bobcat.

All samples were submitted for PCB's analysis by EPA method 8080 and either total lead analysis by EPA method 7420 or TCLP lead analysis by EPA methods 1311/1610/7000. Although the TCLP lead analysis is more relevant to this project, the total lead analysis was used as a "TCLP-equivalent" analysis by correlating a total lead value of 1300 parts per million (ppm) to a TCLP lead value of 5 milligrams per liter (mg/l).

Three days of air monitoring for lead and PCB's were conducted at the 3 locations shown on Figure 1 in accordance with OSHA method ID121 and NIOSH method 5503, respectively. The sampling period on each day varied between 240 minutes (4 hours) and 300 minutes (5 hours). The flow rates for the lead sampling was 10.0 liters per minutes (lpm) on the first day and 4.0 lpm on the second and third days. The flow rates for PCB's sampling was 2.0 lpm on the first

day and 0.2 lpm on the second and third days. Sample cassetes were set at breathing zone elevations approximately.

Both the shredding and chopping lines were operating during the sampling period on all 3 days. The shredding line was running scrap steel on all 3 days of sampling while the chopping line was running scrap copper. Incoming material was off-loaded and sorted as is normally done.

TABLE 1

PROCESS STREAM SAMPLE ID'S
Chicago International Exporting

Material	Round #	Sample ID	# of Containers
Baghouse dust - shredding line	1	BDS-1	1
Baghouse dust - chopping line	1	BDC-1	1
Baghouse dust - shredding line	2	BDS-2	1
Baghouse dust - chopping line	2	BDC-2	2
Baghouse dust - both lines combined	3	BDSC-3	3
Baghouse dust - both lines combined	3	BD-3B	8
Seperator table fluff	1	STF-1	1
Seperator table fluff	2	STF-2	2
Seperator table fluff	3	STF-3	3
Copper fines	1	CF-1	1
Copper fines	2	CF-2	2
Copper fines	3	CF-3	4
Baghouse dust from shredder pickings	1	SP-BD-1	1
Copper scrap from shredder pickings	1	SP-CS-1	--
Steel scrap from shredder pickings	1	SP-SS-1	--
Copper fines from shredder pickings	1	SP-CF-1	1
Pre - shredded shredder pickings	2	SP-2	--
Duplicate of Pre - shredded shredder pickings	2	SP-2D	--
Scrap copper	1	SC-1	--
Scrap copper	2	SC-2	--
Scrap copper	3	SC-3	--
Scrap steel	1	SS-1	--
Scrap steel	2	SS-2	--
Scrap steel	3	SS-3	--
"--" indicates that sample was collected from stockpile.			

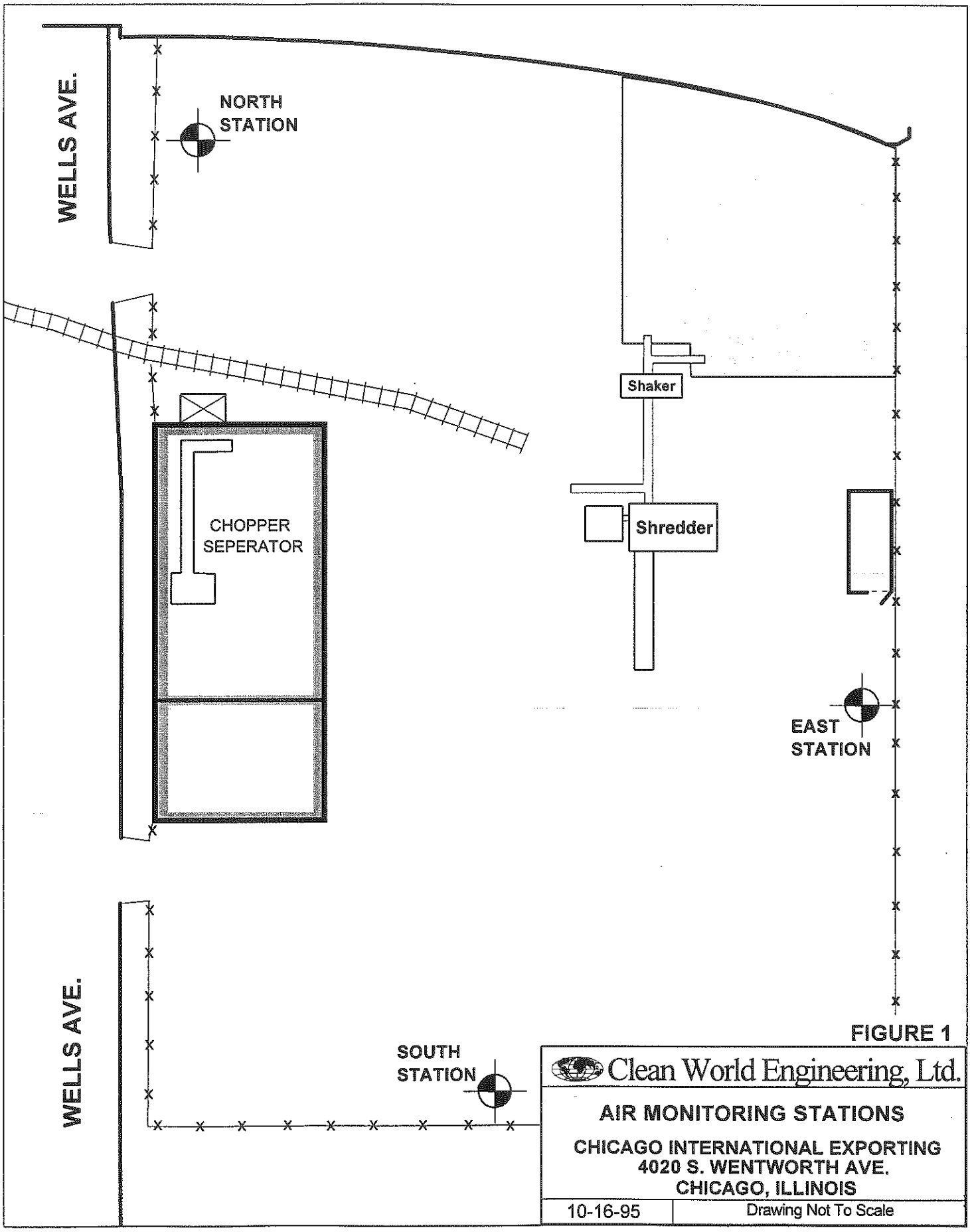

FIGURE 1

Clean World Engineering, Ltd.

AIR MONITORING STATIONS

CHICAGO INTERNATIONAL EXPORTING
4020 S. WENTWORTH AVE.
CHICAGO, ILLINOIS

10-16-95	Drawing Not To Scale

DRAFT

3.0 RESULTS

Table 2 summarizes the results of the process stream materials and Table 3 summarizes the results for the air sampling. Complete analytical packages are contained in Appendix A.

Figure 2 illustrates the distribution of PCB's in the load of shredder pickings that were processed through the shredder. The total of 6.4 ppm was obtained by summing the proportionate contribution from each of the shredder end products.

TABLE 2

PROCESS STREAM ANALYTICAL RESULTS
Chicago International Exporting

Material	Round 1	Round 2	Round 3	Duplicate
PCBs				
Baghouse dust - shredding line	224	274	--	--
Baghouse dust - chopping line	195	76	--	--
Baghouse dust - both lines combined	--	--	283	150
Seperator table fluff	129	71	140	--
Copper fines	19	31	165	--
Baghouse dust from shredder pickings	280	--	--	--
Copper scrap from shredder pickings	8.1	--	--	--
Steel scrap from shredder pickings	0.83	--	--	--
Copper fines from shredder pickings	39	--	--	--
Pre - shredded shredder pickings	--	63	--	2.9
Scrap copper	23	19	80	--
Scrap steel	0.35	0.94	7.8	--
TCLP LEAD				
Baghouse dust - shredding line	0.14	LT 0.08	--	--
Baghouse dust - chopping line	LT 0.08	3.81	--	--
Baghouse dust - both lines combined	--	--	0.38	5.57
Seperator table fluff	51.9	29.3	37.8	--
TOTAL LEAD				
Copper fines	2,100	481	230	--
Scrap copper	LT 4.0	350	LT 4.0	--
Scrap steel	2,200	84.7	220	--
Baghouse dust from shredder pickings	1,300	--	--	--
Copper scrap from shredder pickings	81	--	--	--
Steel scrap from shredder pickings	1,700	--	--	--
Copper fines from shredder pickings	1,200	--	--	--
Pre - shredded shredder pickings	--	LT 80	--	LT 20

NOTE: All results reported in units of parts per million. LT indicates less than detection limit

TABLE 3

SUMMARY OF AIR MONITORING RESULTS
Chicago International Exporting

Station	Day	PCB's (mg/m^3)	PCB PEL (mg/m^3)	Lead (mg/m^3)	Lead PEL (mg/m^3)
North	1	LT 0.00042	0.5	LT 0.0010	0.05
	2	LT 0.0038	0.5	LT 0.0023	0.05
	3	LT 0.0033	0.5	LT 0.0021	0.05
	3 (duplicate)	LT 0.0036	0.5	LT 0.0023	0.05
East	1	LT 0.00042	0.5	LT 0.0010	0.05
	2	LT 0.0036	0.5	LT 0.0024	0.05
	3	LT 0.0031	0.5	LT 0.0021	0.05
South	1	LT 0.00042	0.5	LT 0.0010	0.05
	2	LT 0.0036	0.5	LT 0.0025	0.05
	3	LT 0.0031	0.5	LT 0.0021	0.05

Notes:
LT indicates result was less than the detection limit shown. mg/m^3 means milligrams per cubic meter.
PEL is OSHA's Permissible Exposure Level.

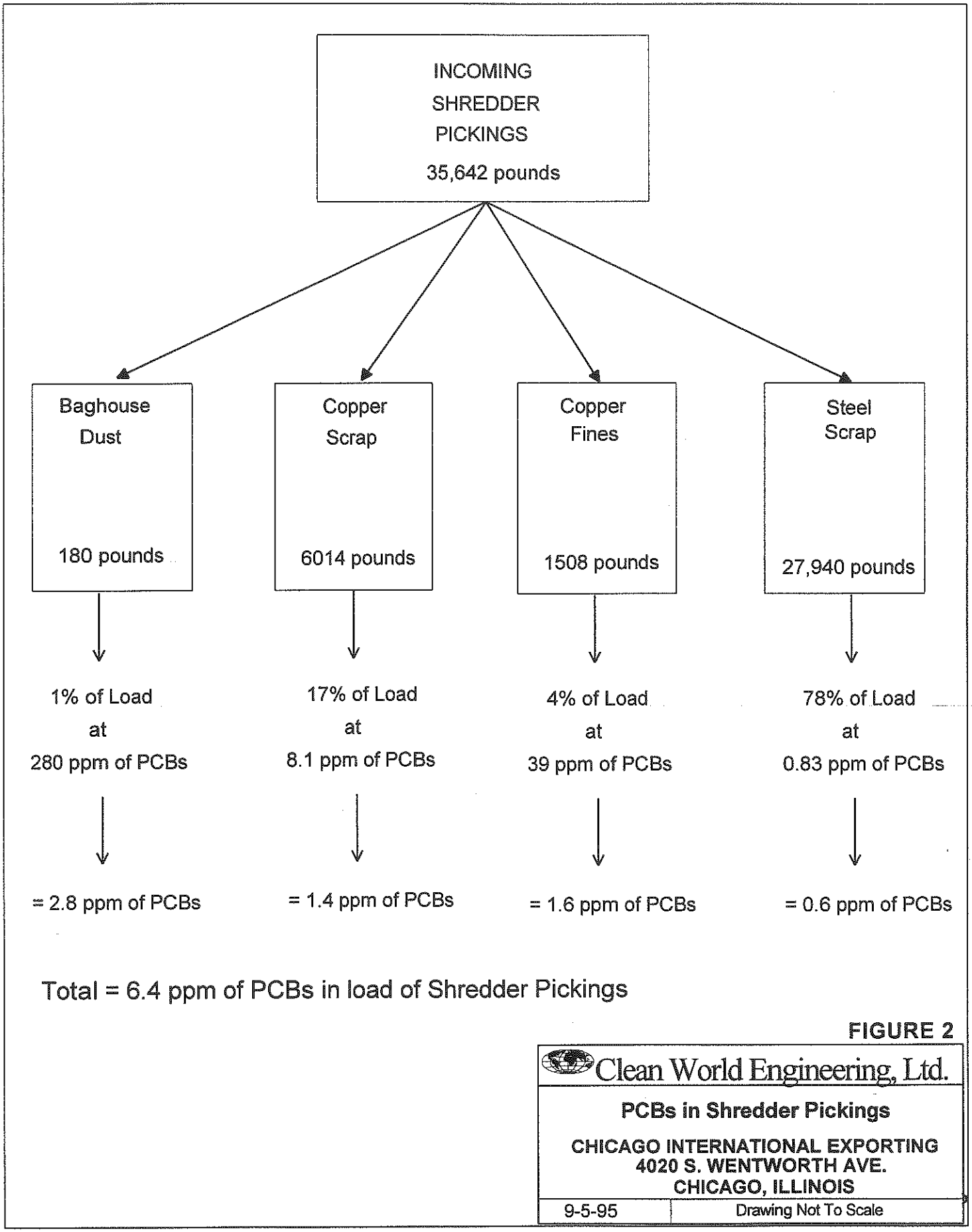

FIGURE 2

Clean World Engineering, Ltd.

PCBs in Shredder Pickings

CHICAGO INTERNATIONAL EXPORTING
4020 S. WENTWORTH AVE.
CHICAGO, ILLINOIS

9-5-95	Drawing Not To Scale

DRAFT

4.0 STATISTICAL ANALYSIS

This section presents the results of our statistical analyses on the three rounds of process stream samples. Because lead and PCBs were not detected at a detection limit significantly below OSHA's permissible exposure limits, statistical analyses were not performed on the air monitoring results.

As indicated in the sampling plan, the analytical results were subjected to the Hypothesis Test for Monitoring Programs as detailed in Appendix A.2 of USEPA's Sampling Guidance for Scrap Metal Shredders: Field Manual (EPA 747-R-93-009, August 1993). Based on this approach, the hypothesis that the materials of concern do not exceed the regulatory standards for PCBs and lead is being tested. In CIE's case, the applicable standards are:

- 50 parts per million (ppm) of PCBs;
- 5 milligrams per liter (mg/l) of TCLP lead; and
- 1300 ppm of total lead (which roughly corresponds to 5 mg/l of TCLP lead and is being termed "TCLP-equivalent" in this report)

The Hypothesis Test for Monitoring Programs approach involves a comparison of the average concentration of a particular material to a numerical cutoff value. If the average concentration is less than the cutoff value, the test concludes that the material is in compliance with the standard. If not, the test concludes that the material is in violation of the standard. This test takes into consideration laboratory and sampling errors.

The cutoff value is determined by the following equation:

$$CutoffValue = (Standard) + (t - value)\left(\frac{Standard\ Deviation}{\sqrt{Sample\ Size}}\right)$$

The *t-value* for 3 composite samples is 2.90. Table 4 summarizes the Hypothesis Test results.

TABLE 4
Hypothesis Testing For Monitoring Programs
Chicago International Exporting

Material	Round 1	Round 2	Round 3	Standard Deviation	Average	Cut-Off Value	50 ppm Exceedance?
PCB RESULTS							
Baghouse Dust	224	274	283	31.8	260.3	103.2	Yes
Seperator Table Fluff	129	71	140	37.1	113.3	112.1	Yes
Copper Fines	19	31	165	81.1	71.7	185.7	No
Copper Scrap	23	19	80	34.1	40.7	107.1	No
Steel Scrap	0.35	0.94	7.8	4.1	3.0	56.9	No
TCLP LEAD RESULTS							
Baghouse Dust	0.14	3.81	5.57	2.8	3.2	9.6	No
Seperator Table Fluff	51.9	29.3	37.8	11.4	39.7	24.1	Yes
TOTAL LEAD RESULTS							
Copper Fines	2100	481	230	1015.0	937.0	2999.4	No
Copper Scrap	2	350	40	190.9	130.7	1619.6	No
Steel Scrap	2200	84.7	220	1184.1	834.9	3282.6	No